



#8/A

SEQUENCE LISTING

<110> Dedhar, Shoukat
Hannigan, Greg

<120> Integrin-Linked Kinase and its Uses

<130> KINE-001CON2

<140> US 09/840,704

<141> 2001-04-23

<150> 60/009,074

<151> 1995-12-21

<150> 08/752,345

<151> 1996-11-19

<150> 08/955,841

<151> 1997-10-21

<150> 09/390,425

<151> 1999-09-03

<150> 09/566,906

<151> 2000-05-09

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<170> FastSEQ for Windows Version 4.0

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<212> DNA

<213> Homo sapiens

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<221> CDS

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<221> Other

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tccccaatcc aggggactcg gcgccgggac gctgct atg gac gac att ttc act 174
Met Asp Asp Ile Phe Thr
1 5

cag tgc cgg gag ggc aac gca gtc gcc gtt cgc ctg tgg ctg gac aac 222
Gln Cys Arg Glu Gly Asn Ala Val Ala Val Arg Leu Trp Leu Asp Asn
10 15 20

acg gag aac gac ctc aac cag ggg gac gat cat ggc ttc tcc ccc ttg 270

Thr	Glu	Asn	Asp	Leu	Asn	Gln	Gly	Asp	Asp	His	Gly	Phe	Ser	Pro	Leu		
		25					30					35					
cac	tgg	gcc	tgc	cga	gag	ggc	cgc	tct	gct	gtg	gtt	gag	atg	ttg	atc	318	
His	Trp	Ala	Cys	Arg	Glu	Gly	Arg	Ser	Ala	Val	Val	Glu	Met	Leu	Ile		
	40					45					50						
atg	cgg	ggg	gca	cgg	atc	aat	gta	atg	aac	cgt	ggg	gat	gac	acc	ccc	366	
Met	Arg	Gly	Ala	Arg	Ile	Asn	Val	Met	Asn	Arg	Gly	Asp	Asp	Thr	Pro		
	55				60					65					70		
ctg	cat	ctg	gca	gcc	agt	cat	gga	cac	cgt	gat	att	gta	cag	aag	cta	414	
Leu	His	Leu	Ala	Ala	Ser	His	Gly	His	Arg	Asp	Ile	Val	Gln	Lys	Leu		
				75					80					85			
ttg	cag	tac	aag	gca	gac	atc	aat	gca	gtg	aat	gaa	cac	ggg	aat	gtg	462	
Leu	Gln	Tyr	Lys	Ala	Asp	Ile	Asn	Ala	Val	Asn	Glu	His	Gly	Asn	Val		
			90					95					100				
ccc	ctg	cac	tat	gcc	tgt	ttt	tgg	ggc	caa	gat	caa	gtg	gca	gag	gac	510	
Pro	Leu	His	Tyr	Ala	Cys	Phe	Trp	Gly	Gln	Asp	Gln	Val	Ala	Glu	Asp		
		105					110					115					
ctg	gtg	gca	aat	ggg	gcc	ctt	gtc	agc	atc	tgt	aac	aag	tat	gga	gag	558	
Leu	Val	Ala	Asn	Gly	Ala	Leu	Val	Ser	Ile	Cys	Asn	Lys	Tyr	Gly	Glu		
	120					125					130						
atg	cct	gtg	gac	aaa	gcc	aag	gca	ccc	ctg	aga	gag	ctt	ctc	cga	gag	606	
Met	Pro	Val	Asp	Lys	Ala	Lys	Ala	Pro	Leu	Arg	Glu	Leu	Leu	Arg	Glu		
	135				140				145						150		
cgg	gca	gag	aag	atg	ggc	cag	aat	ctc	aac	cgt	att	cca	tac	aag	gac	654	
Arg	Ala	Glu	Lys	Met	Gly	Gln	Asn	Leu	Asn	Arg	Ile	Pro	Tyr	Lys	Asp		
				155					160					165			
aca	ttc	tgg	aag	ggg	acc	acc	cgc	act	cgg	ccc	cga	aat	gga	acc	ctg	702	
Thr	Phe	Trp	Lys	Gly	Thr	Thr	Arg	Thr	Arg	Pro	Arg	Asn	Gly	Thr	Leu		
			170					175					180				
aac	aaa	cac	tct	ggc	att	gac	ttc	aaa	cag	ctt	aac	ttc	ctg	acg	aag	750	
Asn	Lys	His	Ser	Gly	Ile	Asp	Phe	Lys	Gln	Leu	Asn	Phe	Leu	Thr	Lys		
		185					190					195					
ctc	aac	gag	aat	cac	tct	gga	gag	cta	tgg	aag	ggc	cgc	tgg	cag	ggc	798	
Leu	Asn	Glu	Asn	His	Ser	Gly	Glu	Leu	Trp	Lys	Gly	Arg	Trp	Gln	Gly		
	200					205					210						
aat	gac	att	gtc	gtg	aag	gtg	ctg	aag	gtt	cga	gac	tgg	agt	aca	agg	846	
Asn	Asp	Ile	Val	Val	Lys	Val	Leu	Lys	Val	Arg	Asp	Trp	Ser	Thr	Arg		
	215				220					225					230		
aag	agc	agg	gac	ttc	aat	gaa	gag	tgt	ccc	cgg	ctc	agg	att	ttc	tcg	894	
Lys	Ser	Arg	Asp	Phe	Asn	Glu	Glu	Cys	Pro	Arg	Leu	Arg	Ile	Phe	Ser		
				235					240					245			
cat	cca	aat	gtg	ctc	cca	gtg	cta	ggg	gcc	tgc	cag	tct	cca	cct	gct	942	
His	Pro	Asn	Val	Leu	Pro	Val	Leu	Gly	Ala	Cys	Gln	Ser	Pro	Pro	Ala		

250	255	260	
cct cat cct act ctc atc aca cac tgg atg ccg tat gga tcc ctc tac			990
Pro His Pro Thr Leu Ile Thr His Trp Met Pro Tyr Gly Ser Leu Tyr			
265	270	275	
aat gta cta cat gaa ggc acc aat ttc gtc gtg gac cag agc cag gct			1038
Asn Val Leu His Glu Gly Thr Asn Phe Val Val Asp Gln Ser Gln Ala			
280	285	290	
gtg aag ttt gct ttg gac atg gca agg ggc atg gcc ttc cta cac aca			1086
Val Lys Phe Ala Leu Asp Met Ala Arg Gly Met Ala Phe Leu His Thr			
295	300	305	310
cta gag ccc ctc atc cca cga cat gca ctc aat agc cgt agt gta atg			1134
Leu Glu Pro Leu Ile Pro Arg His Ala Leu Asn Ser Arg Ser Val Met			
315	320	325	
att gat gag gac atg act gcc cga att agc atg gct gat gtc aag ttc			1182
Ile Asp Glu Asp Met Thr Ala Arg Ile Ser Met Ala Asp Val Lys Phe			
330	335	340	
tct ttc caa tgt cct ggt cgc atg tat gca cct gcc tgg gta gcc ccc			1230
Ser Phe Gln Cys Pro Gly Arg Met Tyr Ala Pro Ala Trp Val Ala Pro			
345	350	355	
gaa gct ctg cag aag aag cct gaa gac aca aac aga cgc tca gca gac			1278
Glu Ala Leu Gln Lys Lys Pro Glu Asp Thr Asn Arg Arg Ser Ala Asp			
360	365	370	
atg tgg agt ttt gca gtg ctt ctg tgg gaa ctg gtg aca cgg gag gta			1326
Met Trp Ser Phe Ala Val Leu Leu Trp Glu Leu Val Thr Arg Glu Val			
375	380	385	390
ccc ttt gct gac ctc tcc aat atg gag att gga atg aag gtg gca ttg			1374
Pro Phe Ala Asp Leu Ser Asn Met Glu Ile Gly Met Lys Val Ala Leu			
395	400	405	
gaa ggc ctt cgg cct acc atc cca cca ggt att tcc cct cat gtg tgt			1422
Glu Gly Leu Arg Pro Thr Ile Pro Pro Gly Ile Ser Pro His Val Cys			
410	415	420	
aag ctc atg aag atc tgc atg aat gaa gac cct gca aag cga ccc aaa			1470
Lys Leu Met Lys Ile Cys Met Asn Glu Asp Pro Ala Lys Arg Pro Lys			
425	430	435	
ttt gac atg att gtg cct atc ctt gag aag atg cag gac aag			1512
Phe Asp Met Ile Val Pro Ile Leu Glu Lys Met Gln Asp Lys			
440	445	450	
taggactgga aggtccttgc ctgaactcca gaggtgtcgg gacatggttg ggggaatgca			1572
cctccccaaa gcagcaggcc tctggttgcc tccccgcct ccagtcattg tactaccca			1632
gcctgggggtc catcccttc ccccatccct accactgtgc gcaagagggg cgggctcaga			1692
gctttgtcac ttgccacatg gtgtctccca acatggggagg gatcagcccc gcctgtcaca			1752
ataaagttta ttatgaaaaa aaaaaaaaaa aaaaaaa			1789

<210> 2

<211> 452
 <212> PRT
 <213> Homo sapiens

<400> 2

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			20					25					30		
His	Gly	Phe	Ser	Pro	Leu	His	Trp	Ala	Cys	Arg	Glu	Gly	Arg	Ser	Ala
		35					40					45			
Val	Val	Glu	Met	Leu	Ile	Met	Arg	Gly	Ala	Arg	Ile	Asn	Val	Met	Asn
	50					55					60				
Arg	Gly	Asp	Asp	Thr	Pro	Leu	His	Leu	Ala	Ala	Ser	His	Gly	His	Arg
65					70					75					80
Asp	Ile	Val	Gln	Lys	Leu	Leu	Gln	Tyr	Lys	Ala	Asp	Ile	Asn	Ala	Val
				85					90					95	
Asn	Glu	His	Gly	Asn	Val	Pro	Leu	His	Tyr	Ala	Cys	Phe	Trp	Gly	Gln
			100					105					110		
Asp	Gln	Val	Ala	Glu	Asp	Leu	Val	Ala	Asn	Gly	Ala	Leu	Val	Ser	Ile
		115					120						125		
Cys	Asn	Lys	Tyr	Gly	Glu	Met	Pro	Val	Asp	Lys	Ala	Lys	Ala	Pro	Leu
	130					135					140				
Arg	Glu	Leu	Leu	Arg	Glu	Arg	Ala	Glu	Lys	Met	Gly	Gln	Asn	Leu	Asn
145					150					155					160
Arg	Ile	Pro	Tyr	Lys	Asp	Thr	Phe	Trp	Lys	Gly	Thr	Thr	Arg	Thr	Arg
				165					170					175	
Pro	Arg	Asn	Gly	Thr	Leu	Asn	Lys	His	Ser	Gly	Ile	Asp	Phe	Lys	Gln
		180					185						190		
Leu	Asn	Phe	Leu	Thr	Lys	Leu	Asn	Glu	Asn	His	Ser	Gly	Glu	Leu	Trp
		195					200					205			
Lys	Gly	Arg	Trp	Gln	Gly	Asn	Asp	Ile	Val	Val	Lys	Val	Leu	Lys	Val
	210					215					220				
Arg	Asp	Trp	Ser	Thr	Arg	Lys	Ser	Arg	Asp	Phe	Asn	Glu	Glu	Cys	Pro
225					230					235					240
Arg	Leu	Arg	Ile	Phe	Ser	His	Pro	Asn	Val	Leu	Pro	Val	Leu	Gly	Ala
				245					250					255	
Cys	Gln	Ser	Pro	Pro	Ala	Pro	His	Pro	Thr	Leu	Ile	Thr	His	Trp	Met
			260					265					270		
Pro	Tyr	Gly	Ser	Leu	Tyr	Asn	Val	Leu	His	Glu	Gly	Thr	Asn	Phe	Val
		275					280					285			
Val	Asp	Gln	Ser	Gln	Ala	Val	Lys	Phe	Ala	Leu	Asp	Met	Ala	Arg	Gly
	290					295					300				
Met	Ala	Phe	Leu	His	Thr	Leu	Glu	Pro	Leu	Ile	Pro	Arg	His	Ala	Leu
305					310					315					320
Asn	Ser	Arg	Ser	Val	Met	Ile	Asp	Glu	Asp	Met	Thr	Ala	Arg	Ile	Ser
				325					330					335	
Met	Ala	Asp	Val	Lys	Phe	Ser	Phe	Gln	Cys	Pro	Gly	Arg	Met	Tyr	Ala
			340					345					350		
Pro	Ala	Trp	Val	Ala	Pro	Glu	Ala	Leu	Gln	Lys	Lys	Pro	Glu	Asp	Thr
		355					360					365			
Asn	Arg	Arg	Ser	Ala	Asp	Met	Trp	Ser	Phe	Ala	Val	Leu	Leu	Trp	Glu
	370					375					380				
Leu	Val	Thr	Arg	Glu	Val	Pro	Phe	Ala	Asp	Leu	Ser	Asn	Met	Glu	Ile
385					390					395					400
Gly	Met	Lys	Val	Ala	Leu	Glu	Gly	Leu	Arg	Pro	Thr	Ile	Pro	Pro	Gly
				405					410					415	

Ile Ser Pro His Val Cys Lys Leu Met Lys Ile Cys Met Asn Glu Asp
420 425 430
Pro Ala Lys Arg Pro Lys Phe Asp Met Ile Val Pro Ile Leu Glu Lys
435 440 445
Met Gln Asp Lys
450

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<212> PRT
<213> Homo sapiens

<220>
<221> Other
<222> (0)...(0)

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His Gly Phe Ser Pro Leu His Trp Ala Cys Arg Glu Gly Arg Ser Ala
35 40 45
Val Val Glu Met Leu Ile Met Arg Gly Ala Arg Ile Asn Val Met Asn
50 55 60
Arg Gly Asp Asp Thr Pro Leu His Leu Ala Ala Ser His Gly His Arg
65 70 75 80
Asp Ile Val Gln Lys Leu Leu Gln Tyr Lys Ala Asp Ile Asn Ala Val
85 90 95
Asn Glu His Gly Asn Val Pro Leu His Tyr Ala Cys Phe Trp Gly Gln
100 105 110
Asp Gln Val Ala Glu Asp Leu Val Ala Asn Gly Ala Leu Val Ser Ile
115 120 125
Cys Asn Lys Tyr Gly Glu Met Pro Val Asp Lys Ala Lys Ala Pro Leu
130 135 140
Arg Glu Leu Leu Arg Glu Arg Ala Glu Lys Met Gly Gln Asn Leu Asn
145 150 155 160
Arg Ile Pro Tyr Lys Asp Thr Phe Trp Lys Gly Thr Thr Arg Thr Arg
165 170 175
Pro Arg Asn Gly Thr Leu Asn Lys His Ser Gly Ile Asp Phe Lys Gln
180 185 190
Leu Asn Phe Leu Thr Lys Leu Asn Glu Asn His Ser Gly Glu Leu Trp
195 200 205
Lys Gly Arg Trp Gln Gly Asn Asp Ile Val Val Lys Val Leu Lys Val
210 215 220
Arg Asp Trp Ser Thr Arg Lys Ser Arg Asp Phe Asn Glu Glu Cys Pro
225 230 235 240
Arg Leu Arg Ile Phe Ser His Pro Asn Val Leu Pro Val Leu Gly Ala
245 250 255
Cys Gln Ser Pro Pro Ala Pro His Pro Thr Leu Ile Thr His Trp Met
260 265 270
Pro Tyr Gly Ser Leu Tyr Asn Val Leu His Glu Gly Thr Asn Phe Val
275 280 285
Val Asp Gln Ser Gln Ala Val Lys Phe Ala Leu Asp Met Ala Arg Gly
290 295 300
Met Ala Phe Leu His Thr Leu Glu Pro Leu Ile Pro Arg His Ala Leu

305					310					315					320
Asn	Ser	Arg	Ser	Val	Met	Ile	Asp	Glu	Asp	Met	Thr	Ala	Arg	Ile	Ser
				325					330					335	
Met	Ala	Asp	Val	Lys	Phe	Ser	Phe	Gln	Cys	Pro	Gly	Arg	Met	Tyr	Ala
			340					345					350		
Pro	Ala	Trp	Val	Ala	Pro	Glu	Ala	Leu	Gln	Lys	Lys	Pro	Glu	Asp	Thr
		355				360						365			
Asn	Arg	Arg	Ser	Ala	Asp	Met	Trp	Ser	Phe	Ala	Val	Leu	Leu	Trp	Glu
	370				375						380				
Leu	Val	Thr	Arg	Glu	Val	Pro	Phe	Ala	Asp	Leu	Ser	Asn	Met	Glu	Ile
385				390					395					400	
Gly	Met	Lys	Val	Ala	Leu	Glu	Gly	Leu	Arg	Pro	Thr	Ile	Pro	Pro	Gly
			405				410						415		
Ile	Ser	Pro	His	Val	Cys	Lys	Leu	Met	Lys	Ile	Cys	Met	Asn	Glu	Asp
		420				425						430			
Pro	Ala	Lys	Arg	Pro	Lys	Phe	Asp	Met	Ile	Val	Pro	Ile	Leu	Glu	Lys
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Met	Gln	Asp	Lys												
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<220>
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Phe	Gly	Glu	Val	Trp	Met	Gly	Thr	Trp	Asn	Gly	Thr	Thr	Lys	Val	Ala
			20					25					30		
Ile	Lys	Thr	Leu	Lys	Pro	Gly	Thr	Met	Met	Pro	Glu	Ala	Phe	Leu	Gln
		35				40						45			
Glu	Ala	Gln	Ile	Met	Lys	Lys	Leu	Arg	His	Asp	Lys	Leu	Val	Pro	Leu
	50				55					60					
Tyr	Ala	Val	Val	Ser	Glu	Glu	Pro	Ile	Tyr	Ile	Val	Thr	Glu	Phe	Met
65					70				75					80	
Thr	Lys	Gly	Ser	Leu	Leu	Asp	Phe	Leu	Lys	Glu	Gly	Glu	Gly	Lys	Phe
			85					90					95		
Leu	Lys	Leu	Pro	Gln	Leu	Val	Asp	Met	Ala	Ala	Gln	Ile	Ala	Asp	Gly
			100				105						110		
Met	Ala	Tyr	Ile	Glu	Arg	Met	Asn	Tyr	Ile	His	Arg	Asp	Leu	Arg	Ala
		115				120						125			
Ala	Asn	Ile	Leu	Val	Gly	Asp	Asn	Leu	Val	Cys	Lys	Ile	Ala	Asp	Phe
	130				135					140					
Gly	Leu	Ala	Arg	Leu	Ile	Glu	Asp	Asn	Glu	Tyr	Thr	Ala	Arg	Gln	Gly
145				150					155					160	
Ala	Lys	Phe	Pro	Ile	Lys	Trp	Thr	Ala	Pro	Glu	Ala	Ala	Leu	Tyr	Gly
			165					170					175		
Arg	Phe	Thr	Ile	Lys	Ser	Asp	Val	Trp	Ser	Phe	Gly	Ile	Leu	Leu	Thr
		180					185						190		
Glu	Leu	Val	Thr	Lys	Gly	Arg	Val	Pro	Tyr	Pro	Gly	Met	Val	Asn	Arg
	195					200						205			

Glu	Val	Leu	Glu	Gln	Val	Glu	Arg	Gly	Tyr	Arg	Met	Pro	Cys	Pro	Gln
210						215					220				
Gly	Cys	Pro	Glu	Ser	Leu	His	Glu	Leu	Met	Lys	Leu	Cys	Trp	Lys	Lys
225					230					235					240
Asp	Pro	Asp	Glu	Arg	Pro	Thr	Phe	Glu	Tyr	Ile	Gln	Ser	Phe	Leu	Glu
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 <213> Homo sapiens

<220>
 <221> Other
 <222> (1)...(263)

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Phe	Gly	Thr	Val	His	Arg	Ala	Glu	Trp	His	Gly	Ser	Asp	Val	Ala	Val
			20					25					30		
Lys	Ile	Leu	Met	Glu	Gln	Asp	Phe	His	Ala	Glu	Arg	Val	Asn	Glu	Phe
		35					40					45			
Leu	Arg	Glu	Val	Ala	Ile	Met	Lys	Arg	Leu	Arg	His	Pro	Asn	Ile	Val
	50					55					60				
Leu	Phe	Met	Gly	Ala	Val	Thr	Gln	Pro	Pro	Asn	Leu	Ser	Ile	Val	Thr
65					70					75					80
Glu	Tyr	Leu	Ser	Arg	Gly	Ser	Leu	Tyr	Arg	Leu	Leu	His	Lys	Ser	Gly
				85					90					95	
Ala	Arg	Glu	Gln	Leu	Asp	Glu	Arg	Arg	Arg	Leu	Ser	Met	Ala	Tyr	Asp
			100					105					110		
Val	Ala	Lys	Gly	Met	Asn	Tyr	Leu	His	Asn	Arg	Asn	Pro	Pro	Ile	Val
		115					120					125			
His	Arg	Asp	Leu	Lys	Ser	Pro	Asn	Leu	Leu	Val	Asp	Lys	Lys	Tyr	Thr
	130					135					140				
Val	Lys	Val	Cys	Asp	Phe	Gly	Leu	Ser	Arg	Leu	Lys	Ala	Ser	Thr	Phe
145					150					155					160
Leu	Ser	Ser	Lys	Ser	Ala	Ala	Gly	Thr	Pro	Glu	Trp	Met	Ala	Pro	Glu
			165						170					175	
Val	Leu	Arg	Asp	Glu	Pro	Ser	Asn	Glu	Lys	Ser	Asp	Val	Tyr	Ser	Phe
			180					185					190		
Gly	Val	Ile	Leu	Trp	Glu	Leu	Ala	Thr	Leu	Gln	Gln	Pro	Trp	Gly	Asn
		195					200					205			
Leu	Asn	Pro	Ala	Gln	Val	Val	Ala	Ala	Val	Gly	Phe	Lys	Cys	Lys	Arg
	210					215					220				
Leu	Glu	Ile	Pro	Arg	Asn	Leu	Asn	Pro	Gln	Val	Ala	Ala	Ile	Ile	Glu
225					230					235					240
Gly	Cys	Trp	Thr	Asn	Glu	Pro	Trp	Lys	Arg	Pro	Ser	Phe	Ala	Thr	Ile
				245					250						255
Met	Asp	Leu	Leu	Arg	Pro	Leu									
			260												

<210> 6
 <211> 271
 <212> PRT

<213> Homo sapiens

<220>

<221> Other

<222> (1)...(271)

<400> 6

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Phe	Gly	Thr	Val	Tyr	Lys	Gly	Lys	Trp	His	Gly	Asp	Val	Ala	Val	Lys
			20					25					30		
Met	Leu	Asn	Val	Thr	Ala	Pro	Thr	Pro	Gln	Gln	Leu	Gln	Ala	Phe	Lys
		35					40					45			
Asn	Glu	Val	Gly	Val	Leu	Arg	Lys	Thr	Arg	His	Val	Asn	Ile	Leu	Leu
	50					55					60				
Phe	Met	Gly	Tyr	Ser	Thr	Lys	Pro	Gln	Leu	Ala	Ile	Val	Thr	Gln	Trp
65					70				75						80
Cys	Glu	Gly	Ser	Ser	Leu	Tyr	His	His	Leu	His	Ile	Ile	Glu	Thr	Lys
				85					90					95	
Phe	Glu	Met	Ile	Lys	Leu	Ile	Asp	Ile	Ala	Arg	Gln	Thr	Ala	Gln	Gly
			100					105					110		
Met	Asp	Tyr	Leu	His	Ala	Lys	Ser	Ile	Ile	His	Arg	Asp	Leu	Lys	Ser
		115					120					125			
Asn	Asn	Ile	Phe	Leu	His	Glu	Asp	Leu	Thr	Val	Lys	Ile	Gly	Asp	Phe
	130					135					140				
Gly	Leu	Ala	Thr	Val	Lys	Ser	Arg	Trp	Ser	Gly	Ser	His	Gln	Phe	Glu
145					150					155					160
Gln	Leu	Ser	Gly	Ser	Ile	Leu	Trp	Met	Ala	Pro	Glu	Val	Ile	Arg	Met
				165					170					175	
Gln	Asp	Lys	Asn	Pro	Tyr	Ser	Phe	Gln	Ser	Asp	Val	Tyr	Ala	Phe	Gly
		180						185					190		
Ile	Val	Leu	Tyr	Glu	Leu	Met	Thr	Gly	Gln	Leu	Pro	Tyr	Ser	Asn	Ile
	195						200					205			
Asn	Asn	Arg	Asp	Gln	Ile	Ile	Phe	Met	Val	Gly	Arg	Gly	Tyr	Leu	Ser
	210					215					220				
Pro	Asp	Leu	Ser	Lys	Val	Arg	Ser	Asn	Cys	Pro	Lys	Ala	Met	Lys	Arg
225					230					235					240
Leu	Met	Ala	Glu	Cys	Leu	Lys	Lys	Lys	Arg	Asp	Glu	Arg	Pro	Leu	Phe
				245					250					255	
Pro	Gln	Ile	Leu	Ala	Ser	Ile	Glu	Leu	Leu	Ala	Arg	Ser	Leu	Pro	
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 Thr Ser Asp Ala
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 <212> RNA
 <213> Homo sapiens

<400> 13
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<210> 14
 <211> 6
 <212> PRT
 <213> Homo sapiens

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<221> VARIANT
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<210> 15
 <211> 259
 <212> PRT
 <213> Homo sapiens

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 Ile Lys Asn Asp Ala Thr Ala Gln Ala Phe Leu Ala Glu Ala Ser Val
 35 40 45
 Met Thr Gln Leu Leu Arg His Ser Asn Leu Val Gln Leu Leu Gly Val
 50 55 60
 Ile Val Glu Glu Lys Gly Gly Leu Tyr Ile Val Thr Glu Tyr Met Ala
 65 70 75 80
 Lys Gly Ser Leu Val Asp Tyr Leu Arg Ser Arg Gly Arg Ser Val Leu
 85 90 95
 Gly Gly Asp Cys Leu Leu Lys Phe Ser Leu Asp Val Cys Glu Ala Met
 100 105 110
 Glu Tyr Leu Glu Gly Asn Asn Phe Val His His Arg Asp Leu Ala Ala
 115 120 125
 Arg Asn Val Leu Val Ser Glu Asp Asn Val Ala Lys Val Ser Asp Phe
 130 135 140
 Gly Leu Thr Lys Glu Ala Ser Ser Thr Gln Asp Thr Gly Lys Leu Pro
 145 150 155 160
 Val Lys Trp Thr Ala Pro Glu Ala Leu Arg Glu Lys Lys Phe Ser Thr
 165 170 175
 Lys Ser Asp Val Trp Ser Phe Gly Ile Leu Leu Trp Glu Ile Tyr Ser
 180 185 190
 Phe Gly Arg Val Pro Tyr Pro Arg Ile Pro Leu Lys Asp Val Val Pro
 195 200 205
 Arg Val Glu Lys Gly Tyr Lys Met Asp Ala Pro Asp Gly Cys Pro Pro
 210 215 220
 Ala Val Tyr Glu Val Met Lys Asn Cys Trp His Leu Asp Ala Ala Met
 225 230 235 240
 Arg Pro Ser Phe Leu Gln Leu Arg Glu Gln Leu Glu His Ile Lys Thr
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 His Glu Leu

<210> 16
 <211> 265
 <212> PRT
 <213> Homo sapiens

<400> 16
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 Lys Val Leu Asp Lys Val Arg Asp Trp Ser Thr Arg Lys Ser Arg Asp
 35 40 45
 Phe Asn Glu Glu Cys Pro Arg Leu Arg Ile Phe Ser His Pro Asn Val

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Glu	Gly	Thr	Asn	Phe	Val	Val	Asp	Gln	Ser	Gln	Ala	Val	Lys	Phe	Ala
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Lys	Lys	Pro	Glu	Asp	Thr	Asn	Arg	Ser	Ser	Ala	Asp	Met	Trp	Ser	Phe
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 <212> PRT
 <213> Homo sapiens

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<221> VARIANT
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 <223> Xaa = Asn or Asp

<221> VARIANT
 <222> 10, 15
 <223> Xaa = Any Amino Acid

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<210> 18
 <211> 33
 <212> PRT
 <213> Homo sapiens

<400> 18
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1 5 10 15
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 Arg

<210> 19
 <211> 33
 <212> PRT
 <213> Homo sapiens

<400> 19
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 Glu

<210> 20
 <211> 33
 <212> PRT
 <213> Homo sapiens

<400> 20
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 Lys

<210> 21
 <211> 33
 <212> PRT
 <213> Homo sapiens

<400> 21
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